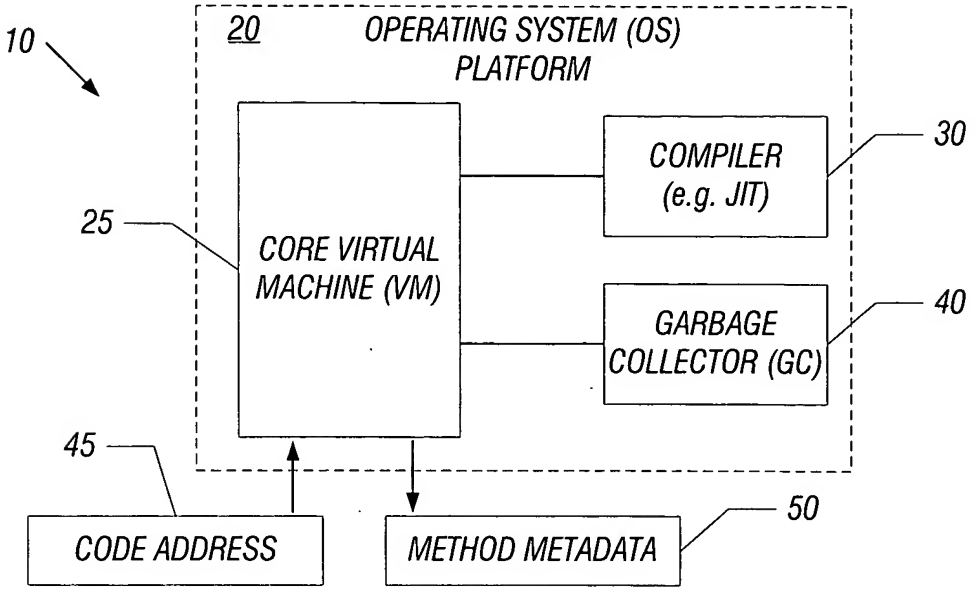
10
20
OPERATING SYSTEM (OS) PLATFORM
25
CORE VIRTUAL MACHINE (VM)
COMPILER (e.g. JIT)
30
GARBAGE COLLECTOR (GC)
40
45
CODE ADDRESS
METHOD METADATA
50

FIG. 1

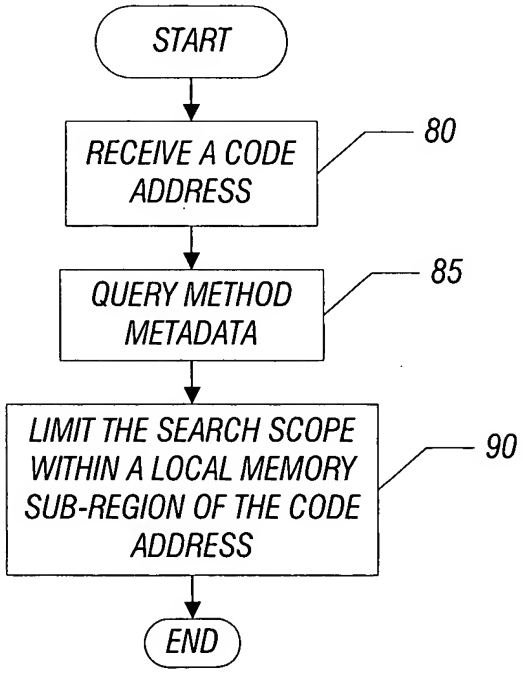
START
RECEIVE A CODE ADDRESS
80
QUERY METHOD METADATA
85
LIMIT THE SEARCH SCOPE WITHIN A LOCAL MEMORY SUB-REGION OF THE CODE ADDRESS
90
END

FIG. 2

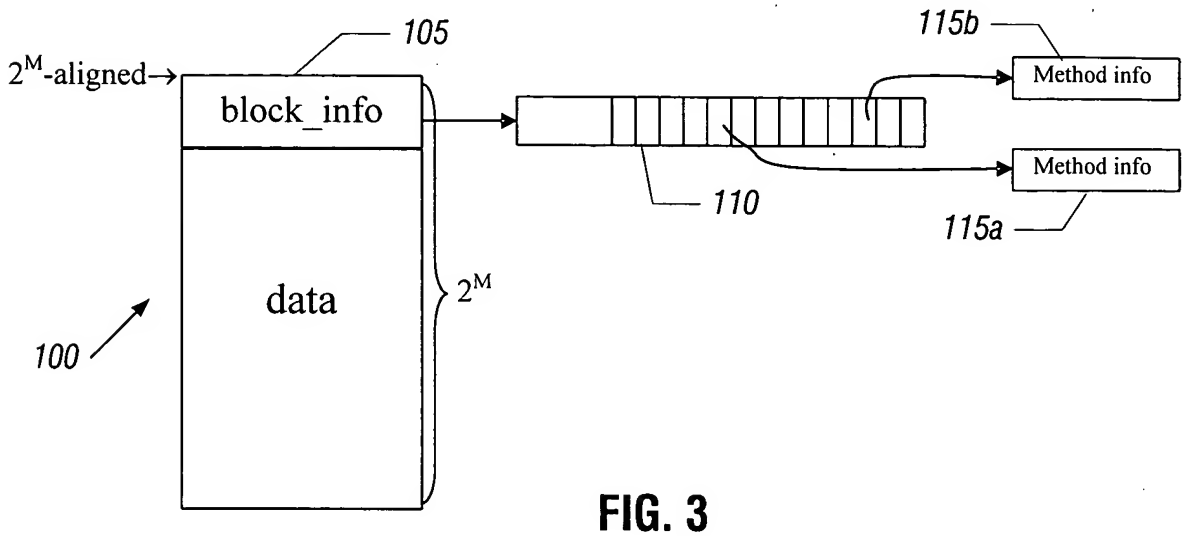

FIG. 3

```
block_info* query_block_info_by_addr(void* addr)
{
   //check whether addr is within the heap
   block_info *bi =
      (block_info*)(((uint32)addr >> M) << M);
   return bi;
}
```

FIG. 4

```
method_info *query_method_info_by_IP(void* ip)
{
  block_info* bi=query_block_info_by_addr(ip);
  method_lookup_table *mlt=bi->mlt;
}
```

FIG. 5

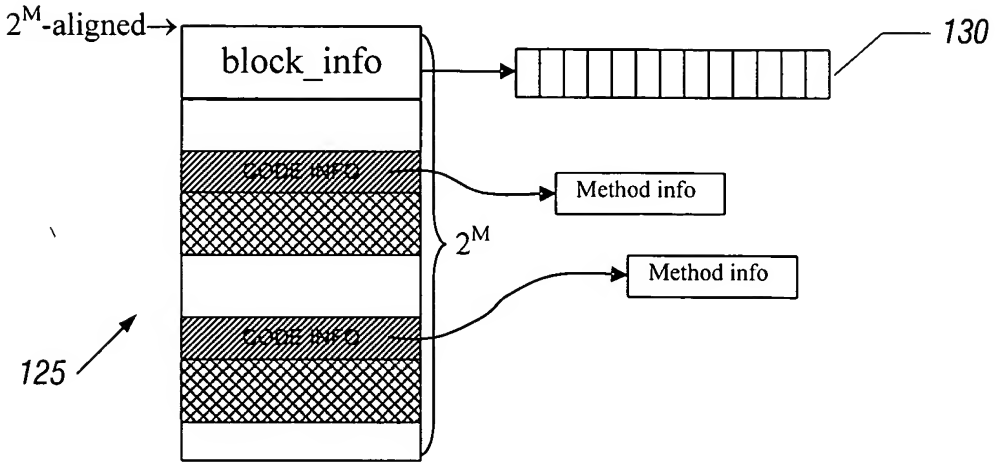

FIG. 6

```
method_info *query_method_info_by_IP(void* ip)
{
   int bit_index = map_address_to_bit_index (A);
   if (bit_index is invalid)
      return NULL;
   bit_index = alloc_bits.last_set_bit_from(bit_index);
   void* code_addr = map_bit_index_to_address (bit_index);
   code_info *ci = (code_info*)code_addr;
   method_info* mi = ci->mi;
}
```

FIG. 7

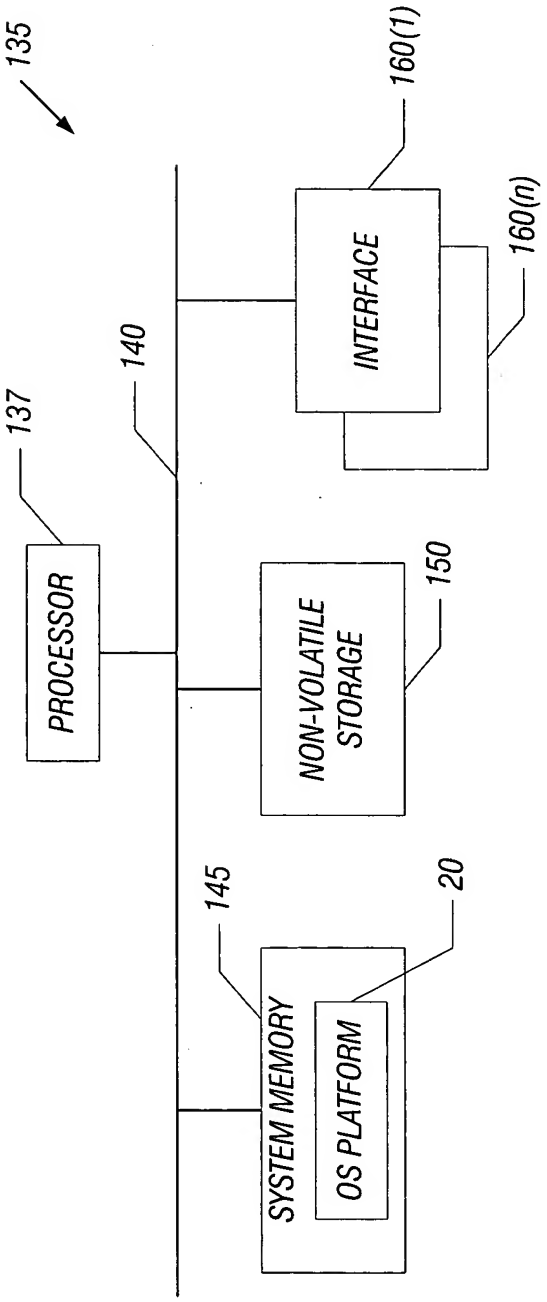
135
160(1)
160(n)
INTERFACE
140
137
PROCESSOR
NON-VOLATILE STORAGE
150
145
20
SYSTEM MEMORY
OS PLATFORM

FIG. 8